

Notice of Allowability	Application No.	Applicant(s)	
	09/846,364	ISHIWATA ET AL.	
	Examiner	Art Unit	
	Karabi Guharay	2879	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to RCE and amendment, filed on 10/14/03.
2. ☒ The allowed claim(s) is/are 1-10,21,22,27 and 30-35.
3. ☒ The drawings filed on 02 May 2001 are accepted by the Examiner.
4. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☒ All b) ☐ Some* c) ☐ None of the:
 1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).
 - * Certified copies not received: _____.
5. ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
 - (a) ☐ The translation of the foreign language provisional application has been received.
6. ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application. **THIS THREE-MONTH PERIOD IS NOT EXTENDABLE**

7. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
8. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No. _____.
 - (b) ☐ including changes required by the proposed drawing correction filed _____, which has been approved by the Examiner.
 - (c) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No. _____.

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the margin according to 37 CFR 1.121(d).

9. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

- | | |
|---|---|
| 1 <input type="checkbox"/> Notice of References Cited (PTO-892) | 5 <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 2 <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 6 <input type="checkbox"/> Interview Summary (PTO-413), Paper No. _____. |
| 3 <input checked="" type="checkbox"/> Information Disclosure Statements (PTO-1449 or PTO/SB/08),
Paper No. <u>filed on 3/10/03</u> | 7 <input checked="" type="checkbox"/> Examiner's Amendment/Comment |
| 4 <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit
of Biological Material | 8 <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance |
| | 9 <input type="checkbox"/> Other _____. |

Continued Examination Under 37 CFR 1.114

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 10/14/03, has been entered.

Amendments, together with the request for RCE, filed on 10/14/03 have been entered.

Claims 11-20, 23-26, 28 and 29 are cancelled.

Claims 1-10, 21, 22 and 27 are amended.

New claims 30-35 are added.

In the title, pursuant to MPEP § 606.01, the title has been changed as follows:

-----ELECTRON SOURCE HAVING AN INSULATING LAYER WITH METAL
OXIDE PARTICLES-----

Allowable Subject Matter

Claims 1-10, 21-22, 27 and 30-35 are allowed over the prior art of record.

Reasons for Allowance

The following is an examiner's statement of reason for allowance:

Regarding claim 1, the prior art of record fails to teach or suggest the combination of limitations set forth in claim 1, particularly an electron source comprising the limitation of an insulating material layer provided on a substrate wherein the

insulating material has a plurality of partially exposed metal oxide particles on its surface and an electron emitting layer and an electrode, connected with the electron emitting material, are disposed on the insulating material.

Regarding claim 2, the prior art of record fails to teach or suggests the combination of limitations set forth in claim 2, particularly an electron source comprising the limitation of an insulating material layer provided on a substrate wherein the insulating material has a plurality of partially exposed metal oxide particles on its surface and a plurality of enclosed metal oxide particles and an electron emitting layer and an electrode, connected with the electron emitting material, are disposed on the insulating material.

Regarding claims 30, 31 and 32, the prior art of record fails to teach or suggests the combination of limitations set forth in claims 30, 31 and 32, particularly comprising an insulating material on a substrate, wherein the insulating layer has a plurality of partially exposed metal oxide particles on its surface and a plurality of enclosed metal oxide particles, and an average particle size of plurality of partially exposed metal oxide particle is larger than an average particle size of the plurality of enclosed metal oxide particles, as in claim 30, or an average size of partially exposed metal oxide particle is in the range 50nm to 70nm wherein an average size of enclosed metal oxide particle is in the range 6nm to 40 nm, as claimed in claim 31, or an average size of partially exposed metal oxide particle is 60 nm wherein an average size of enclosed metal oxide particle is in the range 6nm to 40 nm, as claimed in claim 32.

Claims 3-10, 21-22, 27 and 33-35 are allowed for being dependent on the allowed base claims.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

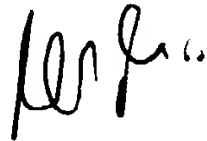
Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Karabi Guharay whose telephone number is (703) 305-1971. The examiner can normally be reached on Monday-Friday 8:30 am - 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nimeshkumar D. Patel can be reached on (703) 305-4794. The fax phone number for the organization is (703) 308-7382.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

K. Guharay
Karabi Guharay
Patent Examiner
Art Unit 2879


NIMESHKUMAR D. PATEL
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